

ABSTRACT OF THE DISCLOSURE

The invention provides an aqueous dispersion for chemical mechanical polishing, by which scratches are 5 reduced even for an article to be polished having a dielectrics low in mechanical strength, both copper film and barrier metal film can be polished with high efficiency, and a sufficiently planarized finished surface with high precision can be provided without overpolishing the 10 dielectrics, and a production process of a semiconductor device.

The aqueous dispersion for chemical mechanical polishing comprises abrasive grains, wherein the abrasive grains include (A) simple particles composed of at least 15 one selected from inorganic particles and organic particles, and (B) composite particles. It is preferred that the simple particles (A) are composed of inorganic particles and composite particles (B) are composed of inorganic organic composite particles that formed of organic 20 particles and inorganic particles combined integraly. The production process of a semiconductor device comprises the step of polishing a surface to be polished of a semiconductor material with the aqueous dispersion for polishing.